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TRANSMITTAL FORM		Application Number	10/791,377
		Filing Date	March 2, 2004
		First Named Inventor	Marcos Dantus et al.
(to be used for all correspondence after initial	al filing)	Art Unit	2878
		Examiner Name	
Total Number of Pages in This Submission		Attorney Docket Number	6550-000057/CPE
	ENCLO	SURES (check all that apply)	
Fee Transmittal Form	☐ Drawin	g(s)	After Allowance Communication to Technology Center (TC)
Fee Attached	Licensi	ng-related Papers	Appeal Communication to Board of Appeals and Interferences
Amendment / Reply	Petition	n	Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
After Final	Petition to Convert to a Provisional Application		Proprietary Information
Affidavits/declaration(s)	Power of Attorney, Revocation Change of Correspondence Address		Status Letter
Extension of Time Request	Terminal Disclaimer		Other Enclosure(s) (please identify below):
Express Abandonment Request		st for Refund	28 sheets of Form PTO-1449 2 Foreign Patent Documents 334 Other Documents
Supplemental Information Disclosure Statement			334 Other Documents
Certified Copy of Priority Document(s)	fees that may be require		nereby authorized to charge any additional red under 37 CFR 1.16 or 1.17 to Deposit
Response to Missing Parts/ Incomplete Application		A duplicate copy of this sheet is enclosed.	
Response to Missing Parts under 37 CFR 1.52 or 1.53			

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name

Signature

Attorney Name Monte L. Falcoff

Monte L. Falcoff

37,617

CERTIFICATE OF TRANSMISSION/MAILING

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This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

PATENT

N THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:

10/791,377

Filing Date:

March 2, 2004

Applicant:

Marcos Dantus et al.

Group Art Unit:

2878

Examiner:

Title:

LASER SYSTEM USING ULTRA-SHORT LASER PULSES

Attorney Docket:

6550-000057/CPE

Director of the United States Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to 37 C.F.R. §§ 1.56, 1.97 and 1.98, Applicant hereby submits an Information Disclosure Statement for consideration by the Examiner.

I. <u>LIST OF PATENTS, PUBLICATIONS, AND OTHER INFORMATION</u>

The patents, publications and other information requested to be considered by the Office (except unpublished U.S. patent applications) are listed on Form 1449 attached hereto.

II. <u>COPIES</u>

A. Submitted herewith is a legible copy of (i) each foreign patent; (ii) each publication or that portion which caused it to be listed, other than U.S. patents and U.S. patent application publications unless required by the Office; (iii) each unpublished U.S. application listed below in Section IV (i.e., including the specification, claims, and any drawing of the application, or that portion of the application which caused it to be listed, including any claims directed to that portion), except for such applications filed on or after June 30, 2003, pursuant to the Waiver of the Copy Requirement in 37 C.F.R. 1.98 (OG Notice dated October 19, 2004); and (iv) all other information or that portion which caused it to be listed.

	B. Any patents, publications or other information 1449 or on the copies of PTO-892, but which are previously cited by or submitted to the PTO in or which has been relied upon for an earlier filing date.	re not enclosed herewith, were ne of the following applications
	U.S. Serial Number U.	S. Filing Date
	C. This is a PCT application in the entry of the States. A copy of the International Search Report information. The documents listed on the Internation the attached Form 1449 for consideration by the any patent resulting from this application. If the I from the US, EPO, or JPO search authorities, cophave been supplied to the USPTO under the	t is attached for the Examiner's ational Search report are listed the Examiner and for listing on nternational Search report was pies of these references should
***	believed to be in the file of the above-identified app	plication. (MPEP 1893.03(g).)
III.	CONCISE EXPLANATION OF THE RELEVANCE	(check <u>at least</u> one box)
	A. Except as may be indicated below in (B), all other information are in the English language (conditions).	Il of the patents, publications or cise explanation not required).
-	B. A concise explanation of the relevance of einformation listed that is not in the English language 1.98(a)(3)):	ach patent, publication or other ge is as follows (see 37 C.F.R.
	1. See the attached foreign patent of counterpart foreign application: International Preliminary Examination Repo	
	2. English translations are provided:	
	3. Other:	
	C. The following additional information is consideration.	provided for the Examiner's

Serial No. 10/791,377

V.	CROSS REFERENCE	TO RELATED APPLICA	TION(S)	
	contain(s) subject ma bringing this(these) ap	tter that may be related	lowing co-pending application the present application iner's attention, Applicant(s U.S.C. § 122.	n. By
	Serial No.	Filing Date	Art Unit	
V .	THIS IDS IS BEING F	ILED UNDER		
	A. 🛭 37 C.F.R. § 1.97	(b): (check <u>only</u> one box)	ı	
	than a continu	ee months of the filing da ed prosecution application fee or certification is requ	ate of a national application on under § 1.53(d) (37 C. uired.	า other F.R. §
	2. within three forth in § 1.491 fee or certificati	in an international applic	entry of the national stage ation (37 C.F.R. § 1.97(b)(2	as set ²)). No
	1.97(b)(3)). No Office Action o under 37 C.F.F 1.97(e) below;	ofee or certification is rent the merits has been R. § 1.97(c) and see the or, if no certification has	Action on the merits (37 C equired. In the event that issued, please consider the e certification under 37 C. s been made, charge our of as required by 37 C.F.R. §	a first his IDS F.R. § deposit
	4. Defore the for continued exist required.	e mailing of a first Office kamination under 37 C.F.	Action after the filing of a r R. § 1.114. No fee or certif	equest fication
	B. 37 C.F.R. § 1.97	(c): (check only one box)		
	before the maili 1.113, a Notice otherwise close	of Allowance under 37	al Office Action under 37 C C.F.R. § 1.311, or an action	.F.R. § on that
	1. ☐ No certific by 37 C.F.R. §	eation; therefore, a fee in 1.17(p).	the amount of \$180.00 is re	quired
	2. ☐ See the c	ertification below No fee	is required	

	C.
	after the mailing date of either a Final Office Action under 37 C.F.R. § 1.113 or a Notice of Allowance under 37 C.F.R. § 1.311, yet on or before payment of the issue fee.
	1. \square See the certification below. A fee in the amount of \$180.00 is required by 37 C.F.R. § 1.17(p).
VI.	CERTIFICATION UNDER 37 C.F.R. § 1.97(e): (check only one box)
	The undersigned hereby certifies that:
	A. each item of information contained in this IDS was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS (See 37 C.F.R. § 1.97(e)(1)). See further statement under 37 C.F.R. 1.704(d) below in section VII, if applicable; or
	B. \square no item of information contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this IDS was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this IDS (See 37 C.F.R. § 1.97(e)(2)).
	C. some of the items of information were first cited in a communication from a foreign patent office. As to this information, the undersigned hereby certifies that each item of information contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS. As to the remaining information, the undersigned hereby certifies that no item of this remaining information contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this IDS was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this IDS.
VII.	STATEMENT UNDER 37 C.F.R. 1.704(d)
	The undersigned hereby states that:
	each item of information contained in this IDS was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this IDS

Serial No. 10/791,377

VIII. PAYMENT OF FEES (check only one box)

- A. A check in the amount of \$180.00 is enclosed for the above identified fee.
- B. Please charge Deposit Account No. 08-0750 in the amount of \$180.00 for the above-indicated fee. A duplicate copy of this paper is attached.

The above references are being cited only in the interest of candor and without any admission that they constitute statutory prior art, contain matter which anticipates the invention, or which would render the same obvious, either singly or in combination, to a person of ordinary skill in the art. Furthermore, this Information Disclosure Statement shall not be construed as a representation that a search has been made.

If it is determined that this IDS has been filed under the wrong rule, the PTO is requested to consider this IDS under the proper rule (with a petition if necessary) and charge the appropriate fee to Deposit Account No. 08-0750.

Please charge any additional fees or credit any overpayment pursuant to 37 C.F.R. § 1.16 or § 1.17 to Deposit Account No. 08-0750.

Respectfully submitted,

Dated: July 26, 2005

Monte L. Falcoff Reg. No. 37,617

Harness, Dickey & Pierce, P.L.C. P.O. Box 828 Bloomfield Hills, Michigan 48303 (248) 641-1600

MLF/lkj

Attachment to 28-Page 1449 Form Listing 334 Other Documents

Categorization of References*

references 1-25

references 26-64

references 65-162

herent Control, Molecular Control,

and/or Ionization: Measurement of Laser

Pulses

Coherent Control, Molecular Control,

and/or Ionization: Theory

Coherent Control, Molecular Control,

and/or Ionization: Experiments In Control

Measurement Apparatuses references 163-173

references 174-176 MALDI

reference 177 Microfabrication

Communications references 178-179

references 180-181 Computer Systems

Phase Measurement and/or Pulse references 182-232

Characterization

references 233-243 Pulse Generation and/or Amplification

references 244-245 Measurement Involving Tissue

references 246-253 Ouantum Mathematical Algorithms and

Theory, Genetic Learning Algorithms

Control of Chemical Reactions references 254-285

Review of Coherent Control references 286-301

references 302-326 Laser Pulse Control / Pulse Shaping

references 327-334 Genetic Learning Algorithms

^{*}These categories are intended to assist the examiner in initial sorting of references by showing their primary relevance to the noted technology area but may also have some relevance to other technology areas claimed and considerable overlap between technology areas. Nevertheless, the Examiner is requested to review all of the cited references and make his/her own relevancy determination.



PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

Sheet 1 of 28

ATTORNEY DOCKET NO.	SERIAL NO.
6550-000057/CPE	10/791,377
APPLICANT	
Marcos Dantus et al.	
FILING DATE	GROUP
March 2, 2004	To Be Assigned

U.S. PATENT DOCUMENTS						
Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
1.		4,288,691	09/08/1981	Horton		
2.		4,772,854	09/20/1988	Silberberg		
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15.		2004/0155184	08/12/2004	Stockman et al.		
16.		2004/0240037	12/02/2004	Harter		
17.		2004/0263950	12/30/2004	Fermann et al.		
18.		2005/0036202	02/17/2005	Cohen et al.		

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Sheet 2 of 28

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6550-000057/CPE 10/791,377		
APPLICANT		
Marcos Dantus et al.		
FILING DATE	GROUP	
March 2, 2004	To Be Assigned	

FOREIGN PATENT DOCUMENTS							
Ref. Desig.	Examiner's Initials	Document Number	Date	Country	Class/ Subclass	Translation Yes	No
1.		WO 99/57318	11/11/1999	US (PCT)		N/A	
2.		WO 01/54323	07/26/2001	US (PCT)		N/A	

OTHE	R DOCUME	NTS (including Author, Title, Date, Pertinent Pages, etc.)
Ref. Desig.	Examiner's Initials	
1.		Dong Gun Lee et al.; "Coherent Control of High-Order Harmonics with Chirped Femtosecond Laser Pulses"; Physical Review Letters, Vol. 87, No. 24, December 10, 2001; pgs. 243902-1-243902-4.
2.		M. Armstrong et al.; "Versatile seven-femtosecond pulse compressor of parametrically amplified pulses using adaptive optics: studies of the primary events in protein dynamics"; Applied Physics B 74 (Suppl), 2002; pgs. S127-S132.
3.		D.S. Chemla et al; "Ultrafast phase dynamics of coherent emission from excitons in GaAs quantum wells"; Physical Review B, Vol. 50, No. 12, September 15, 1995; pgs 8439-8453.
4.		Jerome Tignon et al.; "Spectral Interferometry of Semiconductor Nanostructures"; IEEE Journal of Quantum Electronics, Vol. 35, No. 4; April 1999; pgs. 510-522.
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6.		John D. Hybl et al; "Two-dimensional Fourier transform electronic spectroscopy"; Journal of Chemical Physics, Vol. 115, No. 14; October 8, 2001; pgs. 6606-6622.
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Sheet 3 of 28

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6550-000057/CPE	10/791,377
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Marcos Dantus et al.	
FILING DATE	GROUP
March 2, 2004	To Be Assigned

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Ref. Desig.	Examiner's Initials		
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11.		G.G. Paulus et al.; "Absolute-phase phenomena in photoionization with few-cycle laser pulses"; Nature, Vol. 414; November 8, 2001; pgs. 182-184.	
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13.		M. Hentschel et al.; "Attosecond metrology"; Nature, Vol. 414; November 29, 2001; pgs. 509-513.	
14.		L. Lepetit et al.; "Linear techniques of phase measurement by femtosecond spectral interferometry for applications in spectroscopy"; J. Opt. Soc. Am. B, Vol. 12, No. 12; December 1995; pgs. 2467-2474.	
15.		L. Lepetit et al.; "Two-dimensional nonlinear optics using Fourier-transform spectral interferometry"; Optics Letters, Vol. 21, No. 8; April 15, 1996; pgs. 564-566.	
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21.		Christophe Dorrer; "Influence of the calibration of the detector on spectral interferometry"; J. Opt. Soc. Am. B; Vol. 16, No. 7; July 1999; pgs. 1160-1168.	
22.		Allison W. Albrecht et al.; "Experimental distinction between phase shifts and time delays: Implications for femtosecond spectroscopy and coherent control of chemical reactions"; Journal of Chemical Physics, Vol. 111, No. 24; December 22, 1999; pgs. 10934-10955.	

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Sheet 4 of 28

ATTORNEY DOCKET No.	SERIAL NO.
6550-000057/CPE	10/791,377
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Marcos Dantus et al.	
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27.		Michael Messina et al.; "Quantum control of multidimensional systems: Implementation within the time-dependent Hartree approximation"; J. Chem Phys. 104; January 1996; pgs. 173-182.	
28.		D.H. Schirrmeister et al; "Femtosecond pulse dependence of dissipation in molecular systems"; Chemical Physics Letters December 4, 1998; pgs. 383-390.	
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Examiner:	Date Considered:	

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Sheet 5 of 28

SERIAL NO.
10/791,377
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To Be Assigned

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37.		Jianwei Che et al.; "Detection and Control of Molecular Quantum Dynamics"; J. Phys. Chem.; 1995; pgs. 14949-14958.
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40.		Jianshu Cao et al.; "A simple physical picture for quantum control of wave packet localization"; J. Chem Phys., 107; August 1, 1997; pgs. 1441-1450.
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Examiner:	Date Considered:

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Sheet 6 of 28

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FILING DATE	GROUP
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OTHE	OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)		
Ref. Desig.	Examiner's Initials		
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52.		S.E. Harris; "Control of Feshbach resonances by quantum interference"; Physical Review A66; 2002; pgs. 010701-1-010701-4.	
53.		John M. Jean et al.; "Application of a multilevel Redfield theory to electron transfer in condensed phases"; J. Chem. Phys. 96; April 15, 1992; pgs. 5827-5842.	
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55.		L.D. Ziegler et al.; "Nonlinear polarization description of phase-locked pulse-pair spectroscopy"; J. Chem. Phys., Vol. 97, No. 7; October 1, 1992; pgs. 4704-4713.	
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